-- 30. (New) The composition according to claim 29 wherein said solid support is non-porous. --

-- 31. (New) The composition according to claim 30 wherein said non-porous solid support is selected from the group consisting of glass, plastic, polystyrene, dextran and polypropylene. --

-- 32. (New) The composition according to claim 27 wherein said system comprises a member selected from the group consisting of a well, a tube, a cuvette and an apparatus that comprises a plurality of said wells, tubes or cuvettes. --

-- 33. (New) The composition according to claim 32 wherein said well comprises a microtiter well. --

-- 34. (New) The composition according to claim 27 wherein said solid support and said system are composed of the same materials. --

-- 35. (New) The composition according to claim 27 wherein said solid support and said system are composed of different materials. --

-- 36. (New) The composition according to claim 27 wherein one of said oligonucleotide or polynucleotide strands is indirectly fixed or immobilized to the solid support. --

-- 37. (New) The composition according to claim 36 wherein said oligonucleotide or polynucleotide strand is indirectly fixed or immobilized to the solid support by sandwich hybridization. --

-- 38. (New) The composition according to claim 27 wherein said signalling moiety is indirectly attached to the oligonucleotide or polynucleotide. --

-- 39. (New) The composition according to claim 38 wherein said signalling moiety is indirectly attached to the oligonucleotide or polynucleotide through the formation of a complex. --

-- 40. (New) The composition according to claim 39 wherein said complex is selected from the group consisting of biotin and avidin, biotin and streptavidin, and a sugar and a lectin. --

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-- 41. (New) The composition according to claim 38 wherein said chemical label is indirectly attached to the oligonucleotide or polynucleotide through a bridging moiety. --

-- 42. (New) The composition according to claim 41 wherein the signalling moiety of said chemical label is indirectly or directly attached thereto. --

-- 43. (New) The composition according to claim 27 wherein said signalling moiety is selected from the group consisting of an enzyme, a co-enzyme, a chelating agent, a chromagen, a fluorescent agent and a chemiluminescent agent. --

-- 44. (New) The composition according to claim 27 wherein said soluble signal is generated from a chromagen, or by fluorescence or chemiluminescence. --

-- 45. (New) The composition according to claim 44 wherein said soluble signal is indirectly generated by an enzyme or enzymatic reaction. --

-- 46. (New) An apparatus comprising:

1) a solution containing means comprising a transparent or translucent non-porous device; and

2) means for forming a fixed or immobilized double-stranded oligonucleotide or polynucleotide hybrid to a solid support, said hybrid comprising a chemical label attached to one strand of said hybrid, said label further comprising a signalling moiety which will generate a soluble signal; and

3) a soluble signal generating means. --

-- 47. (New) A kit for generating a soluble signal from a chemically labeled double-stranded oligonucleotide or polynucleotide, comprising in one or more containers:

(i) a first single-stranded oligonucleotide or polynucleotide strand or sequence having attached thereto a chemical label that further comprises a signalling moiety which will generate a soluble signal, said sequence being partially homologous or hybridizable to a sequence contained in a nucleic acid of interest, and said sequence being directly or indirectly fixed or immobilized to a solid support;

(ii) a second single-stranded oligonucleotide or polynucleotide sequence which is homologous to a different sequence contained in said sample nucleic acid than said first sequence (i);

(iii) a solution for generating a soluble signal; and

(iv) buffers and instructions therefor. --

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